

REMARKS

Claims 1-58 are pending in the application.

Claims 1-40, 42-45, 47-52, and 54-57 stand rejected.

Claims 41, 46, 53, and 58 stand objected to.

Claims 4, 8, 12, 14-15, 21, 23-24, 27, 29-30, 42-43, and 47-48 have been amended.

Amendments to portions of the Specification have been proposed. These amendments correct either typographical errors within the cited sections or are responsive to objections raised in the Office Action. Applicants submit that none of these amendments to the Specification constitute an addition of new matter to the application.

Rejection of Claims under 35 U.S.C. §112

Claims 1-38, 42-43, 47-48, 50-51, and 55-56 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Specifically, the Examiner has rejected Claims 1-4, 10-12, 18-21, and 25-27 for the stated reason that “it is unclear how a buffer status (which is an attribute of the buffer) has anything to do with a transport gap (which describes an overhead portion of a frame structure, of which overhead data is not entered into the buffer),” and that therefore “the word ‘keying’ (or ‘identifying’, as suggested by the applicant in a remark in response to the previous office action) is indefinite because the relationship between the buffer status and the transport gap (i.e., the buffer status and the transport gap) has not been properly defined in the claims.” The rejection appears to require that all the claim terms be

defined within the claims themselves. Applicants respectfully submit that this is not required by 35 U.S.C. § 112 para. 2. Instead, “[t]he meaning of every term used in a claim should be apparent from the prior art or from the specification and drawings at the time the application is filed.” MPEP 2173.05(a). The relationship between the buffer status and the transport gap is well-established within the Specification, as is the use of the term “keying” to describe that relationship. *See, e.g.*, Specification, page 12, ¶ 2 (“The foregoing [pp. 4-12] has described how to determine almost empty and almost full status of FIFO buffers when such buffers are keyed to non-standard SONET frames.”); Specification, page 5, ¶ 1 (“In one embodiment, a method includes but is not limited to keying a buffer status to a transport gap other than a standard SONET transport gap.”); Specification, page 9, ¶ 1 (“It has been discovered by the inventors that since pointer interpreter 208 and pointer generator 212 are keyed to different frame structures (e.g., standard SONET frame 108 and non-standard SONET frame 204 respectively), what constitutes an ‘almost full’ or ‘almost empty’ FIFO buffer 210 will vary dependent upon whether FIFO buffer 210 is being viewed from the standpoint of pointer interpreter 208 or pointer generator 212.”). At least these portions of the specification, as well as other portions of the specification, provide support for the link between buffer status and transport gap as presented in the claims.

The Examiner has also rejected Claim 15 under 35 U.S.C. § 112 para. 2 because the phrase “the transmit buffer” lacks antecedent basis. Applicants have amended Claim 15 to address the rejection.

The Examiner has also rejected Claims 31-38, suggesting that it is unclear what the phrase “the number of columns” stands for. Independent Claim 31 is written:

A SONET node comprising:

at least one pointer interpreter having an almost full buffer detector set substantially equal to a number of columns present in a non-standard SONET transport gap.

Applicants respectfully submit that the phrase “number of columns” in this claim does not refer to slots in the buffer (as suggested by the Examiner), but instead refers to how many columns are found in the non-standard SONET transport gap.

The Examiner has further rejected Claims 31-38 on the basis that “it is unclear whether the ‘number of columns present in an non-standard SONET transfer [sic] gap’ is based on per row of each frame or per entire frame.” Applicants respectfully submit that the Specification presents that the almost full buffer detector is set on a frame basis, rather than on a per row basis. *See, e.g.*, Specification, page 9, ¶ 2 (wherein the almost full condition results in negative stuffing – an act which only makes sense on a frame-by-frame basis, rather than row-by-row).

The Examiner has also rejected Claims 42-43 and 47-48. Applicants have amended these claims to better reflect the disclosure in the figures and the amended specification.

The Examiner has rejected Claims 50-51 and 55-56 on the basis that “it is unclear why an almost full status is based on a detection that the transmit buffer has less empty space (or quantitatively, less than or equal to 5 columns of data space) than required to buffer data while the almost full status is supposed to trigger negative stuffing (i.e., extracting data from the buffer) and, contradictorily, the legend of Figure 4 defines that the almost full status is “at least 3 or 5 slots from full.” Applicants respectfully submit that these claims find support in the Specification as it is currently amended. *See* Specification, page 11, ¶ 2 and amendments thereto, *supra*. Further, the triggering of

negative stuffing upon an “almost full” status of the buffer is suggested throughout the Specification. *See* Specification, page 3, ¶ 3 (“If pointer interpreter 102 and pointer generator 106 find that FIFO 104 is almost full, pointer interpreter 102 and pointer generator 106 engage in appropriate action to ensure that data is not overwritten in FIFO 104 and that pointer generator 106 adjusts the pointer value sufficient to reflect the fact that at least one byte will not be written into FIFO 104 (e.g., the pointer is decremented to reflect negative stuffing).”); Specification, page 9, ¶ 2 (describing the “almost full” condition and the negative stuffing operation that should be accomplished as a result).

Examiner has rejected Claims 5-9, 13-14, 16-17, 22-24, and 28-30 under 35 U.S.C. § 112 para. 2 without providing any reasoning or rationale for such a rejection. Examiner appears to be providing the rejection based upon Form Paragraph 7.34.01, wherein it is noted that “a full explanation of the deficiency of the claims should be supplied,” including identification of “the particular term(s) or limitation(s) which render the claim(s) indefinite and [a statement of] why such term or limitation renders the claim indefinite.” *See* MPEP 706.03(d). Without such specificity supporting Examiner’s rejection, Applicants respectfully submit that they cannot respond to Examiner’s rejection and therefore request that the rejection be withdrawn as to these claims.

For the above reasons, Applicants submit that the Examiner’s rejections under 35 U.S.C. § 112 para. 2 have been responded to and traversed, and therefore request that those same rejections be withdrawn.

Rejection of Claims under 35 U.S.C. §102

Claims 1-6, 8, 10-14, 16, and 18-30 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,628, 651 issued to Ryan ("Ryan"). Applicants respectfully traverse this rejection.

Claim 1 of the present invention recites a limitation "keying a buffer status to a transport gap other than a standard SONET transport gap." The Ryan reference does not make any reference to such a link between buffer status and transport gap. Applicants further respectfully submit that the sections of Ryan cited in the Office Action make no reference to buffer status at all.

In addition, the portion of the Ryan apparatus disclosed in the sections cited in the Office Action do not correspond to modifying a standard SONET frame to a non-standard SONET frame. One section mentions the portion of the Ryan device that performs this function (*see* Ryan, col. 4:54 – col. 5:6), while the other describes Figure 5 as an internal part of the disclosed switch fabric called a timeslot interchange (Ryan, col. 5:21-25, 5:62-6:16). Ryan does not disclose converting from a standard STS-1 frame to the SDF.

Further, Applicants submit that the Examiner has admitted that Ryan does not disclose the limitations of Claim 1. The Examiner states that "Ryan ... does not specifically teach flagging the buffers with almost full and almost empty statuses." *See* Office Action (Jan. 6, 2004), page 10. Without such a teaching, Ryan cannot be said to present a method that specifically relates to determining buffer status.

For at least the reasons stated above, Applicants respectfully submit that independent Claim 1 and dependent Claims 2-6, 8, 10-14, 16, and 18-30 are allowable over Ryan.

Claim 39 stands rejected under 35 U.S.C. §102(e) as being anticipated by AAPA [Applicant Admitted Prior Art]. The reference is suggested to be the discussion presented starting at paragraph 2 of page 2. Applicants respectfully submit that the particular parts of the cited references that the Examiner has relied upon have not been designated as nearly as practicable, and the pertinence of the reference has not been clearly explained, both as required by 37 C.F.R. § 1.104(c)(2). Nevertheless, Applicants have made every attempt to respond to the rejections recited in the Office Action.

Applicants respectfully submit that the referenced section of the Specification does not contain all the limitations of Claim 39; specifically, it fails to disclose “detecting a transition involving at least one SONET frame” as required by Claim 39, nor does it disclose taking a positive or negative stuffing action in response to such a detecting. Without such teachings, the cited reference cannot be said to anticipate Claim 39. For at least these reasons, Applicants respectfully submit that independent Claim 39 is allowable over this reference.

Claims 39-40 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,717, 693 issued to Baydar et al. (“Baydar”). As stated above, Claim 39 requires “detecting a transition involving at least one SONET frame.” Applicants respectfully submit that the cited sections of Baydar do not relate to detecting frame transitions or to using that information to engage in stuffing operations, as is claimed.

Applicants are unable to find within Baydar anything related to a relationship between frame transition and stuffing.

As to dependent Claim 40, Applicants further submit that the referenced sections fail to disclose the treatment of non-standard SONET frames. The VT structures that are referenced in the Office Action are actually found within a standard SONET frame. *See* Baydar, col. 3:5-15 (describing how the virtual tributaries (VT) are mapped into the STS payload in order to facilitate the transport of lower-rate digital signals). For at least the reasons stated above, showing that Baydar does not include every limitation of Claims 39-40, Applicants respectfully submit that independent Claim 39 and dependent Claim 40 are allowable over Baydar.

Rejection of Claims under 35 U.S.C. §103

Claims 9, 17, 31-38, 42-45, 47-52, and 54-55 stand rejected under 35 U.S.C. §103(a) as being anticipated by Baydar further in view of Ryan. Applicants respectfully traverse this rejection.

In order for a claim to be rendered invalid under 35 U.S.C. § 103, the subject matter of the claim as a whole would have to be obvious to a person of ordinary skill in the art at the time the invention was made. *See* 35 U.S.C. § 103(a). This requires: (1) the reference(s) must teach or suggest all of the claim limitations; (2) there must be some teaching, suggestion or motivation to combine references either in the references themselves or in the knowledge of the art; and (3) there must be a reasonable expectation of success. *See* MPEP 2143; MPEP 2143.03; *In re Rouffet*, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998).

Applicants submit that Claims 9, 17, 31-38, 42-45, 47-52, and 54-57 are allowable over these patents because neither of these references, alone or in combination teach all the of the limitations of the rejected claims.

Claims 9 and 17. Claims 9 and 17 are dependent upon Claim 1. As noted, Ryan fails to disclose the limitations of Claim 1 upon which Claims 9 and 17 are dependent. Applicants submit that Baydar does not teach these limitations either, as the referenced sections of Baydar do not disclose keying buffer status to non-standard SONET transport gaps, also as discussed in the previous section.

Claims 31-38. Independent Claim 31 contains a limitation requiring:

at least one pointer interpreter having an almost full buffer detector set substantially equal to a number of columns present in a non-standard SONET transport gap

and independent Claim 35 contains a similar limitation requiring:

at least one pointer generator having an almost empty buffer detector set substantially equal to a number of columns present in a non-standard SONET transport gap.

The Office Action does not present argument or rationale showing the presence of these limitations in the Ryan or Baydar references, alone or in combination. The burden is on the Examiner to support a case of obviousness, including whether the prior art references teach or suggest all of the claim limitations. *See* MPEP 706.02(j). Applicants further submit that, for the reasons presented above, neither Ryan nor Baydar, alone or in combination, teaches these limitations of Claims 31 and 35.

Claims 42-43. Claims 42-43 are dependent upon Claim 39. As stated in the previous section, Baydar fails to disclose the stated limitations of Claim 39. Applicants submit that the referenced sections of Ryan do not teach these limitations either, having no disclosure of detecting a transition involving at least one SONET frame, nor engaging

in stuffing operations in responses to such a detection. Further, the Office Action does not present any specific argument or rationale showing the presence of these limitations in Ryan or Baydar, alone or in combination.

Claims 44-45 and 47-48. Claims 45 and 47-48 are dependent upon independent Claim 44. Similar to independent Claim 39, Claim 44 contains a limitation requiring a “means for detecting a transition involving at least one SONET frame” along with additional limitations requiring means that are responsive to the “means for detecting.” As Applicants assert above for Claim 39, Baydar does not disclose such a means for detecting a transition, nor does the Office Action suggest that Ryan contains disclosure that remedies this deficiency.

Claims 49-52 and 54-57. Claims 49 and 54 are independent claims, Claims 50-52 are dependent upon Claim 49, and Claims 55-57 are dependent upon Claim 54. As with Claims 39 and 44, these claims include a limitation directed toward “detecting a transition involving at least one SONET frame” or a “means for detecting a transition involving at least one SONET frame.” As discussed above, Applicants submit that neither Ryan nor Baydar, alone or in combination, teach this limitation.

For the foregoing reasons, Applicants respectfully submit that neither the Ryan nor Baydar references, alone or in combination, teach the limitations of the listed claims and therefore Applicants submit that these claims are allowable.

In addition, Applicants also respectfully submit that the Examiner has not met the Examiner’s burden of factually supporting the alleged motivation to combine the two references. The Examiner’s duty may not be satisfied by engaging impermissible hindsight; any conclusion of obviousness must be reached on the basis of facts gleaned

from the references. The Examiner must therefore provide evidence to suggest the combination and “[b]road conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence.’” *See In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). The Applicants respectfully submit that the particular parts of the cited references that the Examiner has relied upon and the pertinence of each reference has not been clearly explained, especially with regard to the motivation to combine references in support of the rejection of claims in the first full paragraph on page 11 of the Office Action. Further, the Office action does not establish that such a combination of the teachings of these references would meet with success, as required.

While the Office Action states that “the combination of Baydar’s and Ryan’s teachings would yield the invention as claimed...”, it fails to state where in those references is found the motivation to combine them; that is, why a person of ordinary skill would want to make this combination? Ryan fails to note any need for the elastic store technique of Baydar. Further, Baydar provides no indication of a desire to rearrange the frame as taught by Ryan, and there is no evidence that it would function with such a rearrangement. Even were the references combined in such a way that the synchronized payload of Baydar was rearranged according to Ryan, then the presently claimed invention would still not be used as Baydar’s buffer status would not know of Ryan’s rearranged frame.

For these additional reasons, Applicants respectfully submit that the Office Action fails to support the 35 U.S.C. § 103(a) rejection and therefore these claims are allowable.

CONCLUSION

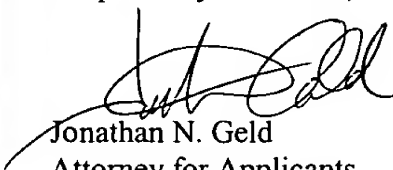
In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5084.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 6, 2004.


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4/6/2004
Date of Signature

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